

Sub 7 9. (Three times Amended) The specimen holder as defined in Claim 1, wherein the diamond is polycrystalline CVD (chemical vapor deposition) diamond.

## REMARKS

Claims 1-17 are pending in the present application. Paragraph 0016 of the specification and claim 9 have been amended to define the term "CVD." Accordingly, applicant respectfully submits that no new matter has been added.

### Election of Species

Applicant confirms that Applicant's representative elected Group I to prosecute on the merits, which corresponds to claims 1-4, 6-12, 14, and 15. Claims 5, 13, 16, and 17 are provisionally withdrawn from examination, pending the allowance of a generic claim. Should generic claim 1 be allowable, applicant respectfully requests that claims 5, 13, 16, and 17 should also be allowable for at least the reasons expressed below.

### Claim Objections

In the Office Action, claim 9 was objected to as not defining the acronym "CVD." Claim 9 has been amended to define this well-known acronym. Accordingly, applicant respectfully requests reconsideration of this objection.

### Claim Rejections Under 35 U.S.C. § 112, second paragraph

In the Office Action, claims 1-4, 6-12, 14 and 15 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite. Applicant respectfully traverses for the following reasons.

Applicant respectfully submits that claim 1 is not indefinite. This claim recites that "at least one of the shaped parts comprises diamond." A person of ordinary skill in the art would have understood the meaning of the term "diamond." The specification

provides description in paragraph 0012 that the “diamond” material has particular properties: “Diamond possesses not only extreme hardness but also the advantage of low specific heat and very good thermal conductivity.” Applicant respectfully disagrees that it is necessary to recite a particular type of diamond with a specific impurity composition when the applicant does not intend to claim in claim 1 a diamond with a particular impurity composition. “Diamond” is a well defined term in itself that conveys a particular material composition different from other materials. See e.g., Webster’s II New College Dictionary (2001 Ed.) “Diamond ... 1. A very hard, highly refractive colorless or white crystalline allotrope of carbon ....” Applicant’s claim 1 covers natural diamonds and synthetic diamonds. As such, claim 1 provides the required “reasonable degree of particularity and distinctness” that is required. See e.g., MPEP 2173.02. Accordingly, applicant respectfully requests reconsideration of this rejection.

**Claim Rejections Under 35 U.S.C. § 102(b)**

In the Office Action, claims 1-4, 8-12, 14 and 15 were rejected under 35 U.S.C. §102(b) as being anticipated by Radtke ('618). Applicant respectfully traverses these rejections for the following reasons.

Radtke cannot anticipate the invention recited in claim 1 because Radtke does not disclose the following features recited in claim 1: (1) a specimen holder for water-containing specimens for high-pressure freezing; (2) at least two shaped parts detachably joinable to one another, wherein the joined shaped parts form a receptacle for holding a specimen, and (3) at least two shaped parts detachably joinable to one another ... wherein at least one of the shaped parts comprises a diamond.

In contrast, Radtke describes a “drill bit for connection on a drill string” to cut rock and other earth formations, with a body that is hollow inside, not a specimen holder for water-containing specimens for high-pressure freezing, as claimed. While Radtke (col. 5, line 49) discloses a disc shaped diamond cutting element 26, this cutting element is not structured to “form a receptacle for holding a specimen” as claimed. This claimed feature is not addressed in the Office Action. Further, cutting element 26 is not “detachably joinable” with the other shaped part as is required by claim 1, but rather, element 26 is “bonded on angular supporting surface 24.” Radtke

(col. 5, line 50). This claimed feature is also not addressed in the Office Action. Thus, Radtke's diamond element 26 does not hold anything, nor is it detachably joinable with another shaped part; rather element 26 cuts rock and earth formations. Even if, *arguendo*, Radtke could be interpreted to show a holder of some type, it does not explicitly or inherently disclose holding "water-containing specimens," or specimens that are frozen under high pressure. Accordingly, applicant respectfully submits that Radtke fails to disclose the recited structure of the claimed specimen holder. For at least these reasons, claims 1-4, 8-12, 14 and 15 are not anticipated by Radtke.

**Claim Rejections Under 35 U.S.C. § 103(a)**

In the Office Action, claims 1-4, 6-12, 14 and 15 were rejected under 35 U.S.C. § 103 as being unpatentable over Radtke. Claims 1-4, 7-12 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Kim. Applicant respectfully traverses these rejections for the following reasons.

The deficiencies of Radtke are noted above. In particular, with respect to the rejection under § 103, the modifications of Radtke proposed in the Office Action would render Radtke's drill bit and nozzle unsatisfactory for its intended purpose in that Radtke's diamond cutting element 26 would no longer be used for cutting rock and earth formations as intended, but would rather be structured to hold a specimen. As is stated in MPEP 2143.01, "the proposed modification cannot render the prior art unsatisfactory for its intended purpose." This unlikely modification is further evidenced by the fact that Radtke and the present application are directed to completely different areas of endeavor: Radtke's device is for drilling rock and earth formations, while applicant claims a specimen holder with detachably joinable shaped parts (one of which comprises a diamond material) for holding water containing specimen for high pressure freezing. It follows that Radtke does not address or even hint at the problems being solved by the claimed invention, e.g., the need for freezing a water containing (e.g., biological) specimen using a holder that provides an undiminished cooling rate. See e.g., paragraph 0010. Thus, for at least these reasons, a person of ordinary skill in the art would not have been motivated to modify Radtke in the manner suggested to produce the claimed invention.

Further, the proposed modification of Kim does not yield applicant's claimed invention. Kim describes a three-part container which "is able to securely accommodate a variety of articles" (cf. Col. 1, line 22). Inside of the container a plurality of openings are provided which serve to accommodate, e.g., a "toothbrush, razor blade, tube of toothpaste, etc." and other toiletries, or make-up products, or writing instruments. See Kim, col. 3, lines 23-40. Kim does not address or even hint that the container is or could be modified to be a "specimen holder for water-containing specimens for high-pressure freezing." Further, applicant respectfully submits that one of ordinary skill in the art would not have been motivated to modify Kim's portable toiletries or writing instruments container (as suggested on page 5 of the Office Action) to include disk-shaped diamonds as upper and lower parts of the container because Kim's object is to provide a container that is "inexpensive" to manufacture and the intended personal use of Kim's container does not require the use of such specialized materials. Moreover, the suggested motivation to modify Kim at page 5, last paragraph of the Office Action concerning the use of metal spacers makes no sense because neither Kim nor the present application mentions or uses "drill bits" or addresses any reason to keep the temperature inside a drill bit consistent.

In order to avoid an improper use of hindsight, the burden lies on the Office to show a motivation to combine references that create the case of obviousness. *In re Rouffet*, 149 F.3d 1350, 1356 (Fed. Cir. 1998). Specifically, the examiner must show reasons that the skilled artisan, confronted with the same problems as the inventor and with no knowledge of the claimed invention, would select the elements from the cited prior art references for combination in the manner claimed. *Id.* The Federal Circuit has identified three possible sources for a motivation to combine references: the nature of the problem to be solved, the teachings of the prior art, and the knowledge of persons of ordinary skill in the art. *Id.* None of those possible sources of motivation are found in this case.

Overall, the cited references contain no mention of any of the objects of the present application and are directed to different fields of endeavor. Thus, for at least the reasons mentioned above, applicant respectfully submits that claim 1 is patentable

over the cited art. In addition, the dependent claims are also patentable over the cited art for at least the same reasons.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable consideration of the application is respectfully requested. The Examiner is encouraged to contact the undersigned if the undersigned can assist in or expedite the prosecution of the application.

Respectfully submitted,

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**Appendix: Marked up Version of the Amended Specification**

Please amend paragraph 0016 as follows:

[0016] It has proven to be advantageous in the context of such specimen holders to use gold or aluminum or copper as the metal, and to utilize a commercially available polycrystalline CVD (chemical vapor deposition) industrial diamond as the diamond.

**Appendix: Marked up Version of the Amended Claims**

Please amend claim 9 as follows:

9. (Three times Amended) The specimen holder as defined in Claim 1, wherein the diamond is polycrystalline CVD (chemical vapor deposition) diamond.